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Effects of doing physical exercises on stress-coping strategies and the intensity of the stress experienced by university students in Zabol, Southeastern Iran

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Abstract

People of all ages, experience stress and try to deal with it. Since, the emotional and physical pressures caused by stress are undesirable and annoying, people to do activities that are motivated to reduce their stress. All these activities that are performed to reduce stress called coping. In various theories of psychology refers to the role of exercise in emotional stability, strengthen confidence, flexibility and better exposure to problems. This research studied the effect of exercise on stress management strategies and has addressed the severity of stress experienced by university student. In this study, 120 students from University of Zabol were selected as sample, 60 of whom were athletes and 60 non-athletes. The questionnaire of coping strategies and the Life Events Scale of Pickle was given to them to measure coping strategies and intensity of stress experienced by them. Results from analysis of data showed that non-athlete students' deal with stress using more sentimental oriented coping strategies and yet they report more intensity of daily stress. But athletes' student used higher levels of problem oriented coping strategies and reported less intensity of stress. So it seems that exercise has effect in selecting efficient and appropriate coping strategies and reduces the intensity of stress.

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1. Introduction

According to Folkman and Lazarus (1980), the term “coping” can be defined as cognitive and behavioral attempts of an individual with an aim to decrease the stress caused by internal or external demands exceeding the individual's resources based on his/her own perception. Folkman and Lazarus (1980) divide coping strategies into two main categories: problem-focused and emotion-focused. The first includes active problem-solving techniques to handle the cause of the stress between a person and his/her environment (Compass et al, 2001). To name some of such strategies, one can mention confronting (taking up the struggle to change an adverse situation), seeking social support (trying to acquire emotional and informational support from others), and planned problem-solving (problem-based attempts for solving an undesired situation. On the other hand, emotion-based strategies are those through which an individual reaches an optimized level of emotional modification as well as the ability to deal with intense and critical conditions and/or feelings (Saarni, 1999).

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Anda, et al. (1991) believe that the increase in instances of committing suicide or getting addicted (to narcotics, etc.) is a sign of mental stress and inefficiency of strategies to cope with psychological and mental health disorders in adults and teenagers (Wong, Leung, Onso 2001). Moreover, such inactive coping strategies as avoidance, denial, or hiding one's feelings related to incompatibility are generally believed to have relationship with everyday stress (Kawask et al, 1996; Simoni Strivastava, 1997). Aldwin and Revenson () have found that problem-focused coping methods act as a mental stress originator. Studies show that those young adults who use coping strategies (strategies for dealing with problems either emotion-based or problem-based) experience less negative emotions compared to those who apply avoidance strategies. The results of most studies and researches imply that exercise (doing physical activities) is very effective in: decreasing stress and depression, increasing mental health, improving life quality, decreasing phobia of success and worry of losing (Biddel, 2000; Morgan, 1007; Hales and Travis, 1987; Odonogio, 2004; Schlicht, 1994).

Zoman (2003) believes that those physically in shape tend to experience less physiological and mental clashes while tackling stressful incidences. Furthermore, the rate of mental diseases is lower in athletes than in others (Zoman, Leur, R, 2003). Based on several studies, there is a positive relationship between physical exercises and mental characteristics (Brad, Ann Mary, 2000). Additionally, doing physical exercises has a positive effect on lowering mental stress and depression (Khabiri, Mohammad, 2009). According to research findings, during athletic competitions, athletes who apply emotion-based coping strategies exhibit more negative affections while those who use problem-based coping strategies show more positive affections (Masoudniya, 2008). Ntoumanis and Biddel (2000) Gaudreau et al. (2001) and Pensgarrrd and Robert (2002) delineated that athletes mostly utilize problem-based coping strategies.

Theories studied in the present research discuss whether there are any differences between athletic and non-athletic university students regarding a) problem-based and emotion-based techniques, and b) the intensity of the experienced stress.

The research method is causal-comparative and descriptive. Here, athletic and non-athletic are the independent variables while different coping strategies are the dependent variables. Sample included 204 university students selected randomly and divided into two equal groups of 102 athletic and 102 non-athletic students. The university selected was Zabol University, Southeastern Iran.

2. Data collection tools

- Karor's Coping-Strategies Questionnaire (Cope, 1989): the over-all validity coefficient of the test was examined using Cronbach's alpha in Iranian format (Pahlavani et al, 2003) ($\alpha = .93$). The reliability of the test can also be regarded acceptable. The coefficient about clarity and accuracy of questions was reported to be 0.76 and the relation between each subscale and its main scale was 0.70 (Pahlevani et al, 2003).
- Pickel's Life-Events Scale: this 65-itemed questionnaire is designed to measure the rate and intensity of the experienced stress in people's lives. Numerous researches on normal and depressed people have reported high validity and reliability for this scale (e.g. Biyazi, 2005). In Iran, too, researchers repeatedly applied this scale in order to evaluate the stress rate of patients involving Coronary Artery Disease (CAD) and the validity coefficient is reported to be 0.73 through re-examining (Khosooofi, 2007).

3. Findings

Distribution and classification of ten stressful events between 65 events in both groups of non-athletic students and athletic students is presented in Table 1. The most stressful events in both groups are financial pressures, people and their relative's physical illness and job stress.

Table 2 showed that the intensity of suffering caused by everyday mental stress experienced by non-athletic students was significantly more than that of the athletic students.

As shown in Table 3, there is a significant difference between athletic and non-athletic students regarding their averages of coping strategies ($P < 0.05$). On the other hand, problem-based coping strategies were applied more by

athletics than by non-athletics while the emotion-based coping strategies were used more by non-athletics than by athletics.

Table 1. Ten stressful events in both groups of non-athletic students and athletic students

	Non-athletic students			Athletic students		
	Ranking	Number	Percentage	Ranking	Number	Percentage
Mild physical illness	1	60	71.82	3	66	40.74
Inadequate income	2	56	54.9	2	69	42.59
Hospitalization a family member due to severe disease	3	53	51.94	4	65	40.12
Moderately financial pressures (rising costs, work pressure)	4	52	50.98	1	75	46.29
Forced Change Location	5	40	39.21	8	35	34.31
Changes in working hours (overtime)	6	39	38.25	9	34	33.31
Changes in live situations	7	37	36.27	6	39	38.25
Death of family members except his wife and children	8	36	35.29	-	-	-
Changes in working conditions (working in a new part or new head)	9	35	34.31	5	37	36.27
Gestation	10	34	33.33	-	-	-
Heavy loans (more than half of annual income)	-	-	-	7	38	37.23
The death of a friend	-	-	-	10	36	35.21

4. Discussion and Interpretation

The results of this research showed that there is a significant relationship between athletic and non-athletic students regarding their utilization of emotion-based and problem-based coping strategies. In other words, the average scores of problem-based coping strategies in athletic students were higher than those of the non-athletic ones, while the average scores of emotion-based coping strategies in non-athletic students were higher than those of the athletic ones. These finding are in line with the results obtained by Gaordio and Blandin (2000), Netomanis and Bidel (2000) and Robert and Pensguard (2002).

As the results of this research showed, the intensity of the stress caused by daily activities among non-athletic university students was significantly more than that of the athletic; this finding is also in line with) previous researches (Nox et al, 1998).

Table 2. Calculated average, standard deviation and t of stress among athletic and non-athletic students

	Average	SD	<i>t</i>	<i>p</i>
Non-athletic students	15.17	10.44	6.44	<i>P</i> <0.0001
Athletic students	7.74	7.03		

Table 3. comparing the average of coping strategies among athletic and non-athletic students

Dependent variable	Groups	Average	SD	df	<i>t</i>	<i>p</i>
problem- based coping strategies	Non-athletic students	81.34	11.01	202	3/78	0/001
	Athletic students	86.42	9/76			
emotion- based coping strategies	Non-athletic students	49.31	7/08	202	-2/19	0/03
	Athletic students	47/34	6/83			

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